

AMENDMENTS TO THE CLAIMS

1. (Cancelled).

2. (Currently Amended) A liquid crystal display comprising:

a first substrate with red, green and blue color filters;

a second substrate comprising;

a TFT;

a data bus line carrying a data signal that is applied to the TFT to drive unit pixels; and

a gate bus line in which a bump-shaped groove is formed at a region where the gate bus line crosses and overlaps the data bus line to prevent the data bus line from opening and through which a gate signal is applied;

wherein current is selectively supplied to the pixel electrode of the unit pixel region defined by the gate bus line and the data bus line so that an electric field is generated between the first substrate and the second substrate; and

a liquid crystal layer between the first substrate and the second substrate,

~~The liquid crystal display according to claim 1,~~ wherein the bump-shaped groove comprises a first portion which is as wide as width of the gate bus line and a second portion which is narrower than the width of the gate bus line.

3. (Currently Amended) A liquid crystal display comprising:

a first substrate with red, green and blue color filters;

a second substrate comprising;

a TFT;

a data bus line carrying a data signal that is applied to the TFT to drive unit pixels; and

a gate bus line in which a bump-shaped groove is formed at a region where the gate bus line crosses and overlaps the data bus line to prevent the data bus line from opening and through which a gate signal is applied;

wherein current is selectively supplied to the pixel electrode of the unit pixel region defined by the gate bus line and the data bus line so that an electric field is generated between the first substrate and the second substrate; and
a liquid crystal layer between the first substrate and the second substrate.

~~The liquid crystal display according to claim 1,~~ wherein the bump-shaped groove has a protruded portion such that the protruded portion narrows along its length.

4. (Currently Amended) A liquid crystal display comprising:
a first substrate with red, green and blue color filters;
a second substrate comprising;
a TFT;
a data bus line carrying a data signal that is applied to the TFT to drive unit pixels; and
a gate bus line in which a bump-shaped groove is formed at a region where the gate bus line crosses and overlaps the data bus line to prevent the data bus line from opening and through which a gate signal is applied;
wherein current is selectively supplied to the pixel electrode of the unit pixel region defined by the gate bus line and the data bus line so that an electric field is generated between the first substrate and the second substrate; and
a liquid crystal layer between the first substrate and the second substrate.

~~The liquid crystal display according to claim 1,~~ wherein the bump-shaped groove comprises:

a protruded portion of which width is widest at an area in which the protrusion crosses the data bus line, is reduced as it goes towards both ends, and is coincident with the data bus line at both ends; and

a small groove extending from the protrusion.

5. (Currently Amended) A liquid crystal display comprising:
a first substrate with red, green and blue color filters;
a second substrate comprising;
a TFT;

a data bus line carrying a data signal that is applied to the TFT to drive unit pixels; and

a gate bus line in which a bump-shaped groove is formed at a region where the gate bus line crosses and overlaps the data bus line to prevent the data bus line from opening and through which a gate signal is applied:

wherein current is selectively supplied to the pixel electrode of the unit pixel region defined by the gate bus line and the data bus line so that an electric field is generated between the first substrate and the second substrate; and

a liquid crystal layer between the first substrate and the second substrate.

~~The liquid crystal display according to claim 1,~~ wherein the bump-shaped groove has a protruded portion of which the width is greatest at a center of the data bus line and the width gets reduces as it goes towards both ends, the protruded portion having a length which is almost the same as that of the data bus line.

6. (Currently Amended) The liquid crystal display according to claim [[1]]2, wherein the bump-shaped groove has an edge that overlaps the data bus line near the center of the data bus line.

7. (Currently Amended) The liquid crystal display according to claim [[1]]2, wherein the bump-shaped groove has a saw tooth-shaped portion.

8. (Currently Amended) The liquid crystal display according to claim [[1]]2, wherein the bump-shaped groove is saw tooth-shaped and generally parallel with the gate bus line.

9. (Currently Amended) The liquid crystal display according to claim [[1]]2, wherein the bump-shaped groove is saw tooth-shaped and narrower than the gate bus line on average.

10. (Currently Amended) The liquid crystal display according to claim [[1]]2, wherein the bump-shaped groove is formed to be saw tooth-shaped in a groove and narrower than the gate bus line.

11. (Cancelled).

12. (Currently Amended) A pixel structure of a liquid crystal display comprising:
a TFT in a unit pixel region;
a data bus line; and
a gate bus line perpendicularly crossing the data bus line to define a unit pixel region and
the gate bus line having an area with a bump structure where the gate bus line overlaps the data
bus line.

~~The pixel structure according to claim 11,~~ wherein the bump structure of the overlapped gate bus line is shaped in that a half of the width of the overlapped data bus line overlaps the overall width of the gate bus line and the other half of the width of the overlapped data bus line overlaps a groove which is narrower than the width of the gate bus line.

13. (Currently Amended) A pixel structure of a liquid crystal display comprising:
a TFT in a unit pixel region;
a data bus line; and
a gate bus line perpendicularly crossing the data bus line to define a unit pixel region and
the gate bus line having an area with a bump structure where the gate bus line overlaps the data
bus line.

~~The pixel structure according to claim 11,~~ wherein the data bus line overlapping the gate bus line at the bump-structured region of the gate bus line has stepped portions at different positions.

14. (Currently Amended) A pixel structure of a liquid crystal display comprising:
a TFT in a unit pixel region;
a data bus line; and

a gate bus line perpendicularly crossing the data bus line to define a unit pixel region and the gate bus line having an area with a bump structure where the gate bus line overlaps the data bus line,

~~The pixel structure according to claim 11,~~ wherein the bump structure of the gate bus line is shaped such that the data bus line overlaps the overall width of the gate bus line at a center of the data bus line and overlaps a groove which is narrower than the width of the gate bus line at both sides of the data bus line overlapping the gate bus line.

15. (Cancelled).

16. (Currently Amended) A pixel structure of a liquid crystal display comprising:
a TFT in a unit pixel region;

a data bus line; and

a gate bus line perpendicularly crossing the data bus line to define a unit pixel region and being shaped in a saw tooth structure at edge portion of an area where the gate bus line overlaps the data bus line to prevent the data bus line from opening.

~~The pixel structure according to claim 15,~~ wherein the saw tooth structure formed in the gate bus line has apexes in a line parallel with the gate bus line.

17. (Currently Amended) A pixel structure of a liquid crystal display comprising:
a TFT in a unit pixel region;

a data bus line; and

a gate bus line perpendicularly crossing the data bus line to define a unit pixel region and being shaped in a saw tooth structure at edge portion of an area where the gate bus line overlaps the data bus line to prevent the data bus line from opening.

~~The pixel structure according to claim 15,~~ wherein the saw tooth structure has apexes which are positioned in a recessed groove region that is smaller than the width of the gate bus line.

18. (Currently Amended) A pixel structure of a liquid crystal display comprising:
a TFT in a unit pixel region;

a data bus line; and
a gate bus line perpendicularly crossing the data bus line to define a unit pixel region and
being shaped in a saw tooth structure at edge portion of an area where the gate bus line overlaps
the data bus line to prevent the data bus line from opening.

~~The pixel structure according to claim 15,~~ wherein the saw tooth structure formed in the gate electrode and the gate bus line comprises at least two apexes.

19. (Currently Amended) A pixel structure of a liquid crystal display comprising:
a plurality of first bus lines which are formed on a substrate of the liquid crystal display so as to define a unit pixel region and through which a signal is applied; and
a second bus line formed before the first bus lines are formed, and having an edge overlapped with the first bus line and shaped in a non-linear structure so that the first bus line is prevented from opening,

wherein the non-linear structure comprises a first portion having a width of the second bus line and a second portion which is narrower than the width of the second bus line.

20. (Original) The pixel structure according to claim 19, wherein the first bus lines are data bus lines and the second bus lines are gate bus lines.

21. (New) The liquid crystal display according to claim 3, wherein the bump-shaped groove has an edge that overlaps the data bus line near the center of the data bus line.

22. (New) The liquid crystal display according to claim 3, wherein the bump-shaped groove has a saw tooth-shaped portion.

23. (New) The liquid crystal display according to claim 3, wherein the bump-shaped groove is saw tooth-shaped and generally parallel with the gate bus line.

24. (New) The liquid crystal display according to claim 3, wherein the bump-shaped groove is saw tooth-shaped and narrower than the gate bus line on average.

25. (New) The liquid crystal display according to claim 3, wherein the bump-shaped groove is formed to be saw tooth-shaped in a groove and narrower than the gate bus line.

26. (New) The liquid crystal display according to claim 4, wherein the bump-shaped groove has an edge that overlaps the data bus line near the center of the data bus line.

27. (New) The liquid crystal display according to claim 4, wherein the bump-shaped groove has a saw tooth-shaped portion.

28. (New) The liquid crystal display according to claim 4, wherein the bump-shaped groove is saw tooth-shaped and generally parallel with the gate bus line.

29. (New) The liquid crystal display according to claim 4, wherein the bump-shaped groove is saw tooth-shaped and narrower than the gate bus line on average.

30. (New) The liquid crystal display according to claim 4, wherein the bump-shaped groove is formed to be saw tooth-shaped in a groove and narrower than the gate bus line.

31. (New) The liquid crystal display according to claim 5, wherein the bump-shaped groove has an edge that overlaps the data bus line near the center of the data bus line.

32. (New) The liquid crystal display according to claim 5, wherein the bump-shaped groove has a saw tooth-shaped portion.

33. (New) The liquid crystal display according to claim 5, wherein the bump-shaped groove is saw tooth-shaped and generally parallel with the gate bus line.

34. (New) The liquid crystal display according to claim 5, wherein the bump-shaped groove is saw tooth-shaped and narrower than the gate bus line on average.

35. (New) The liquid crystal display according to claim 5, wherein the bump-shaped groove is formed to be saw tooth-shaped in a groove and narrower than the gate bus line.

36. (New) A liquid crystal display comprising:

a first substrate with red, green and blue color filters;

a second substrate comprising;

a TFT;

a source electrode and a drain electrode formed on an active layer;

a data bus line carrying a data signal that is applied to the TFT to drive unit pixels; and

a gate bus line in which a bump-shaped groove is formed at a region where the gate bus line crosses and overlaps the data bus line to prevent the data bus line from opening and through which a gate signal is applied:

wherein current is selectively supplied to the pixel electrode of the unit pixel region defined by the gate bus line and the data bus line so that an electric field is generated between the first substrate and the second substrate; and

a liquid crystal layer between the first substrate and the second substrate,

wherein the bump-shaped groove comprises a first portion which is as wide as width of the gate bus line and a second portion which is narrower than the width of the gate bus line.

37. (New) A pixel structure of a liquid crystal display comprising:

a TFT in a unit pixel region;

a pixel electrode;

a data bus line; and

a gate bus line perpendicularly crossing the data bus line to define a unit pixel region and the gate bus line having an area with a bump structure where the gate bus line overlaps the data bus line,

wherein the data bus line overlapping the gate bus line at the bump-structured region of the gate bus line has stepped portions at different positions.

38. (New) A pixel structure of a liquid crystal display comprising:

a TFT in a unit pixel region;
a pixel electrode;
a data bus line; and
a gate bus line perpendicularly crossing the data bus line to define a unit pixel region and being shaped in a saw tooth structure at edge portion of an area where the gate bus line overlaps the data bus line to prevent the data bus line from opening,
wherein the saw tooth structure formed in the gate electrode and the gate bus line comprises at least two apexes.